GOLIGORSKIY, S.D.; ANESTIADE, N.Kh.; KUKIN, N.N., professor, direktor.

Empyema of the stump of the ureter. Klin.med. 31 no.3:87 Mr '53.
(MLRA 6:5)

1. Fakul'tetskaya khirurgicheskaya klinika Kishinevskogo meditsinskogo in-
stituta na baze Respublikanskoy klinicheskoy bol'nitsy.
(Ureters--Diseases) (Empyema)

GOLIGORSKIY, S.D. (Kishinev); TSEBYRNE, K.A. (Kishinev); SHOYKEET, R.N. (Kishinev)

Treatment of acute nonspecific cystitis with presacral novocaine-penicillin blocks. Klin.med. 32 no.1:84 Ja '54. (MLRA 7:4)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (direktor - professor N.N.Kukin) Kishinevskogo meditsinskogo instituta i Respublikanskoy klinicheskoy bol'nitsy.
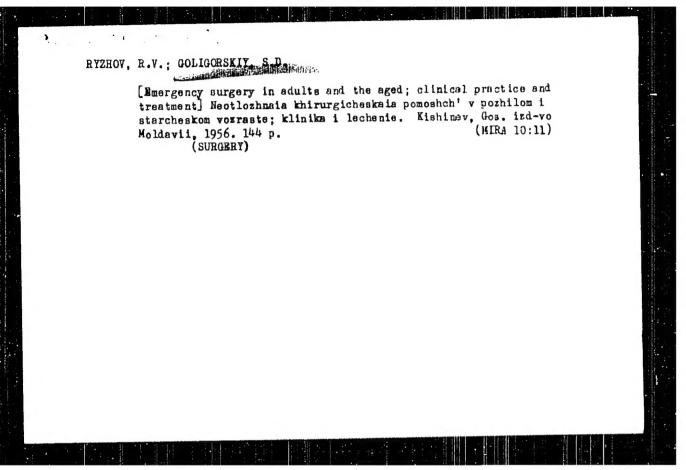(Bladder--Inflammation) (Penicillin)
(Novocaine)

GOLIGORSKIY, S.D., kandidat meditsinskikh nauk; BAEDIYER, L.G.
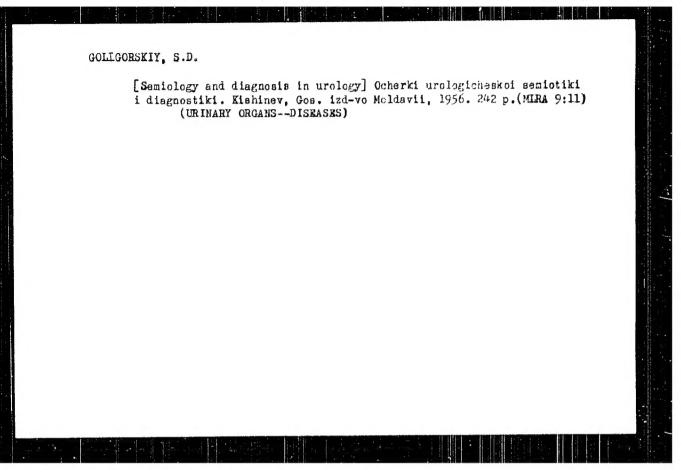
Michelson's vesico-signoid anastomosis in total epispadias.
Urologiia no.2:78-79 Ap-Je '55.   (MLRA 8:10)

1. Iz gospital'noy khirurgicheskoy kliniki (zav.--prof.
P.V.Ryzhov) Kishinevskogo meditsinskogo instituta na baze
Respublikanskoy klinicheskoy bol'nitsv (glavnyy vrach
M.G.Zagurskikh)
       (EPISPADIAS, surgery,
            vesico-signoid anastomosis)

RYZHOV, R.V.; GOLIGORSKIY, S.D.

[Emergency surgery in adults and the aged; clinical practice and treatment] Neotlozhnaia khirurgicheskaia pomoshch' v pozhilom i starcheskom vozraste; klinika i lechenie. Kishinev, Gos. izd-vo Moldavii, 1956. 144 p.   (MIRA 10:11)
      (SURGERY)

GOLIGORSKIY, S.D.

[Semiology and diagnosis in urology] Ocherki urologicheskoi semiotiki
i diagnostiki. Kishinev, Gos. izd-vo Moldavii, 1956. 242 p.(MIRA 9:11)
        (URINARY ORGANS--DISEASES)

GOLIGORSKIY, S.D.

[Studies in urological semiotics and diagnostics] Ocherki urologiche-
skoy semiotiki i diagnostiki. 2 izd. dop. Kishinev, Gos. izd-vo
Moldavii, 1956. 251 p.   (MIRA 10:2)
          (GENITOURINARY ORGANS--DISEASES)

EXCERPTA MEDICA Sec 9 Vol 13/2 Surgery Feb 59

1312. ON THE USE OF ENTEROPLASTY IN UROLOGY (Russian text) - Goli-
gorsky S. D. - EKSPER. KHIR. 1957, 5 (55-58) Illus. 2
The results obtained in experiments on dogs showed that cystoplasty with the aid of
an isolated small bowel loop gives a well functioning organ, does not lead to acid-
osis, causes no untoward changes in the upper urinary tract and is not complicated
by renal insufficiency.

GOLIGORSKIY, S.D.; ZUSMANOVICH, F.N.

Synthomycin in the treatment of urological diseases. Sov.med. 21
Supplement:25 '57.   (MIRA 11:2)

1. Iz gospital'noy khirurgicheskoy kliniki Kishenevskogo meditsin-
skogo instituta.
        (CHLOROMYCETIN)   (URINARY ORGANS--DISEASES)

GOLIGORSKIY, S.D., kandidat meditsinskikh nauk (Kishinev)

    Enterpolasty in urology; review of foreign literature. Urologiia
    22 no.2:62-68 Mr-Ap '57.   (MLRA 10:7)
        (URINARY TRACT, surg.
           plastic replacement with intestinal segments, review (Rus))
        (INTESTINES, transplantation,
           in urinary tract surg., review (Rus))

GOLIGORSKIY, S.D.

GOLIGORSKIY, S.D.

"Diagnostic puncture of the epididymis" [in Rumanian] by T.Burghele,
H.Joachim, D.Bocancea. Reviewed by S.D.Goligorskii. Urologiia 22
no.2:81-82 Mr-Ap '57.   (MIRA 10:7)
        (TESTICLE--DISEASES)

GOLIGORSKIY, S.D.

[Cystitis] TSistity. Kishinev, Gosh. izd-vo Moldavii, 1953.
173 p.   (MIRA 11:4)
        (BLADDER—DISEASES)

EXCERPTA MEDICA Sec 9 Vol 13/4 Surgery Apr 59

2084. INTESTINAL GRAFTS IN UROLOGY (Russian text) - Gorgoraki N.D. -
    FESPER, KHIR, 1956, 2 (41 44)

In experiments on 10 dogs defects in the bladder wall were closed by means of a
spread-out short loop of small intestine, with its mesentery left intact. In some
experiments the whole graft was used, in others the mucosal layer was removed,
and in 5 dogs all layers had been removed except the serosa. Four dogs died:
2 from intestinal obstruction and 1 from peritonitis as a result of purulent cystitis
and pericystitis. The 6 surviving dogs had normal blood urea and chlorides, and
showed no evidence of hyperchloraemic acidosis. When all layers in the graft ex-
cept the serosa are removed, the grafted tissue becomes covered by epithelium of
a transitory type.

GOLIBORSKIY, S.D., kand.med.nauk (Kishinev)

Etiopathogenesis of urolithiasis. Urologiia 23 no.3:67-73 My-Je
'58   (MIRA 11:6)
              (URINARY TRACT, calculi
                    etiopathogen., review (Rus))

GOLIGORSKIY, S.D.

Bending of the urethra in the treatment of urinary incontinence.
Urlogiia 23 no.4:45-48 Jl-Ag '58   (MIRA 11:8)

1. Iz urologicheskogo otdeleniya Respublikanskoy klinichenkoy bol'
nitsy, bazy gospital'noy khirurgicheskoy kliniki (zav. prof. P.V. Ryzhov)
Kishinevskogo meditsinskogo instituta.
          (URINATION DISCRDERS,
                incontinence in epispadias, surg., creation of urethral
                torsion (Ger)
          (EPISPADIAS, compl.
                urinary incontinence, surg. bending of urethra (Rus))
          (URINATION DISORDERS, etiol. & pathogen.
                incontinence in epispadias, surg. bending of urethra (Rus))

GOLIGORSKIY, S.D.

Treatment of patients with contracture of the urinary bladder
by intestinal plastic surgery. Urologiia 23 no.5:9-13 S-O '58
(MIRA 11:11)

1. Iz Respublikanskoy klinicheskoy bol'nitsy Kishineva
(glavnyy vrach Yu.B. Kasperskiy, nauchnyy rukovoditeli - prof.
A.Ya. Pytel' i prof. P.V. Ryzhov).
          (BLADDER, diseases
                contracture, surg. substitute bladder from intestinal
                segment (Rus))
          (INTESTINES, surgery
                substitute bladder form. from intestinal segment
                in contracture of bladder (Rus))

GOLIGORSKIY, S.D.

Acute renal insufficiency in alcoholic intoxication (form "Medicina interna" [Rumanina], 1958, no.3). Urologiia 23 no.5: 88-89 S-O '58   (MIRA 11:11)

(ALCOHOL--PHYSIOLOGICAL EFFECT)
(KIDNEYS--DISEASES)

GOLIGORSKIY, S.D.

Surgery of the adrenal gland (from "China e Medical Journal,"
1958, 76, no.2). Urologiia 23 no.5:92-93 S-O '58   (MIRA 11:11)
(ADRENAL GLANDS—SURGERY)

GOLIGORSKIY, S.D.

Genital injuries from gynecological surgery and their treatment
(from "Chirurgiia" [Rumanian], 1958, no.2). Urologiia 23 no.5
93-94 S-O '58   (MIRA 11:11)
            (GENERATIVE ORGANS, FEMALE--WOUNDS AND INJURIES)

GOLIGORSKIY, S.D., kand. med. nauk (Kishinev).

"Emergency urological treatment in[Rumanian] by T. Burghele and others.
Reviewed by S.D. Goligorskii. Urologiia 23 no.6:75-78 N-D '58.
        (UROLOGY)   (MIRA 11:12)

SOSONKIN, Z.S., GOLIGORSKIY, S.D.

In memory of Professor S.M. Rubashov, honored scientist.
Khirurgiia 34 no.4:155-156 Ap '58   (MIRA 11:7)
            (RUBASHOV, SAVELII MIRONOVICH, 1883-195?)

GOLIGORSKIY, Solomon Davidovich

[Small urinary bladder; problems in intestinal plastic surgery]
Malyi mochevoi puzyr'; voprosy intestinal'noi plastiki. Kishinev,
Kartia Moldoveniake, 1959. 145 p.   (MIRA 13:12)
                    (BLADDER--SURGERY)

GOLIGROSKIY, S.D., kand.med.nauk (Kishinev)

Review of "Surgical gynecology" [in Rumanian] by R. Sirbu and others.
Urologiia 24 no.2:80-81 Mr-Ap '59.   (MIRA 12:12)
         (GYNECOLOGY, OPERATIVE)   (SIRBU, R.)

GOLIGORSKIY, S.D. (Kishinev)

Reply to A.N. Krapivnitskii's criticism of our articel on "Treatment
of contracture of the bladder by intestinal transplants." Urologiia
24 no.3:50-51 My-Je '59.   (MIRA 12:12)
     (BLADDER--DISEASES)   (INTESTINES--TRANSPLANTATION)
                    (KRAPIVNITSKII, A.N.)

RYZHOV,P.V.; GOLIGORSKIY, S.D.; SHOYHER, A., red.; TEL'PIS, V., tekhn .
red.

[Mistakes in preoperational diagnosis; problems in surgical
tactics] Oshibki predoperatsionnogo diagnoza; voprosy khirurgi-
cheskoi taktiki. Kishinev, Gcs. izd-vo "Kartia Moldoveniaske,"
1960. 181 p.   (MIRA 14:5)
    (ABDOMEN--SURGERY)   (URINARY ORGANS--DISEASES)

GOLIGORSKIY, S.D.

"Pyelonephritic refluxes and their clinical importance" by
A.IA. Pytel'. Reviewed by S.D. Goligorskii. Sov. med. 24
no. 10:155-156 Q '60.   (MIRA 13:12)
        (KIDNEYS—DISEASES) (PYTEL', A.IA.)

GOLIGORSKIY, S.D.; KATSYF, A.M.

Organ-preserving operations in disorders of the patency of the
pyeloureteral segment. Urologiia 26 no.1:29-37 '61. (MIRA 14:3)
(KIDNEYS--SURGERY)

PYTEL', Anton Yakovlevich, prof.; GOLIGORSKIY, Solomon Davidovich,
    kand.med.nauk; VOROBTSOV, V.I., red.; ZUYEVA, N.K., tekhn.red.

[Pyelonephritis] Pielonefrit. Moskva, Medgiz, 1961. 200 p.
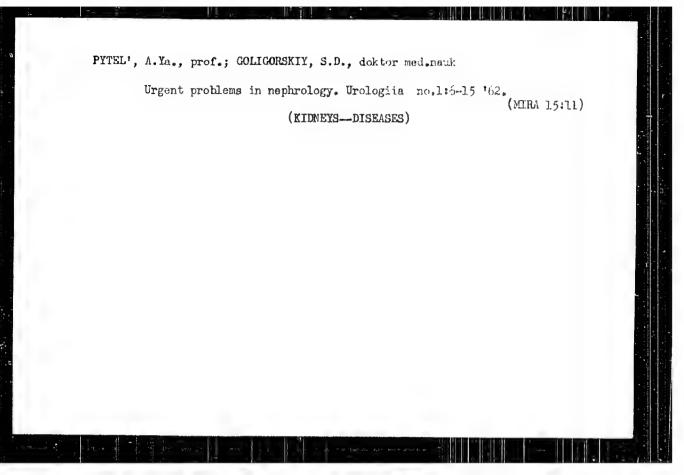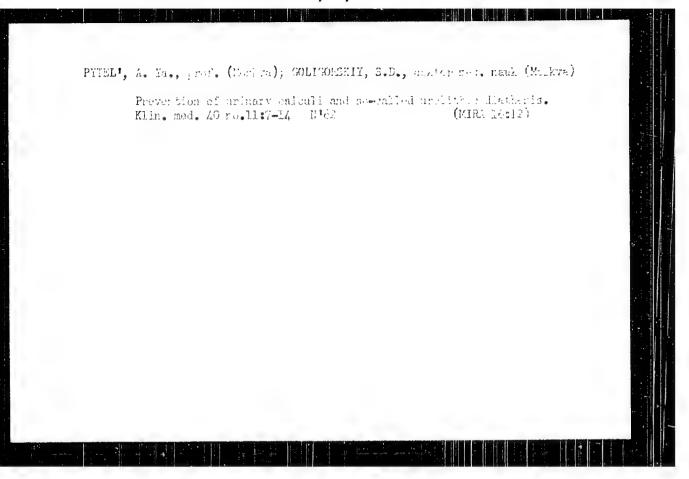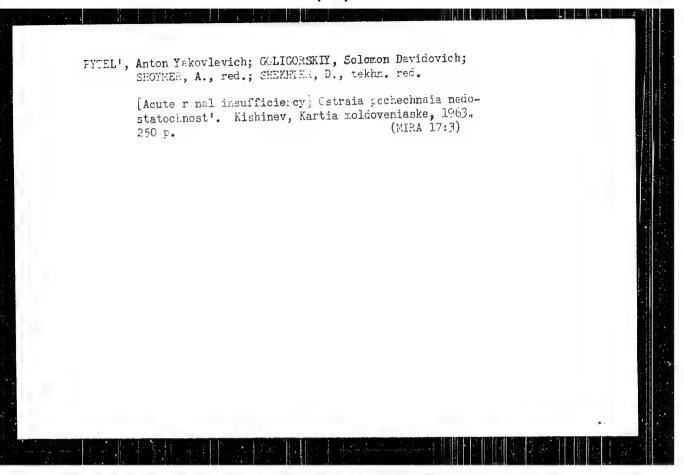   (MIRA 15:7)
            (KIDNEYS—DISEASES)

GOLIGORSKIY, S.D., kand.med.nauk (Kishinev)

"Acute renal insufficiency" by Gh. Olanescu, L. Geogrescu
and M. Dimitriu. Reviewed by S.D. Goligorskii. Urologiia
25 no.1:81-82 Ja-F '60.   (MIRA 15:6)
                    (RENAL INSUFFICIENCY)
           (OLANESCU, Gh.) (GEOGRESCU, L.) (DIMITRIU, M)

GOLIGORSKIY, S.D.; PYTEL', A.Ya.; ?EROV, L.F.; BE?IN?L-?A??, ?.?.; KLEBINSKIY, V.?., ?BEL', N.Ya.; ?????O?, L.S.; ?????A, ?.?.

Reports. Urologiia 25 no.1:69-73 Ja-F '60.   (MIRA 13:?)
                    (UNCLASSI?IED A?C)

PYTEL', A.Ya., prof.; GOLIGORSKIY, S.D., doktor med. nauk; DZHAVAD-
ZADE, M.D., kand. med. nauk; LOPATKIN, N.A., doktor med. nauk;
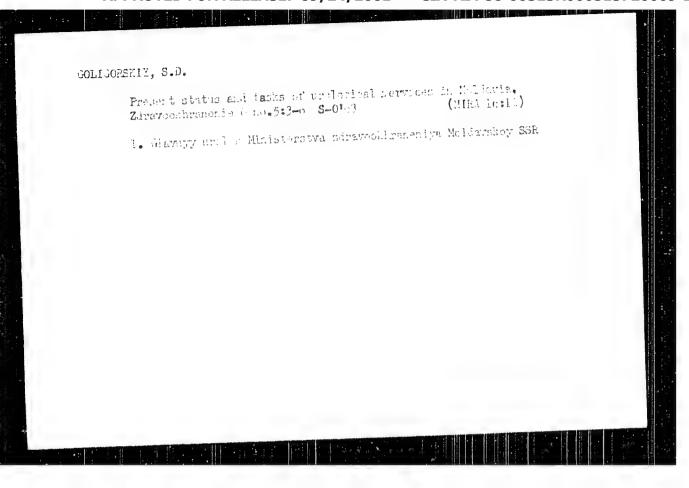GOL'DIN, G.I., red.; POGOSHINA, M.V., tekhn. red.

[Artificial kidney and its clinical use]Iskusstvennaia pochka
i ee klinicheskoe primenenie. Pod red. i s predisl. A.IA.Pytelia.
Moskva, Medgiz, 1961. 291 p.   (MIRA 15:10)
                  (KIDNEYS, ARTIFICIAL)

PYTEL', A.Ya., prof.; GOLIGORSKIY, S.D., doktor med.nauk

    Urgent problems in nephrology. Urologiia no.1:6-15 '62.

                                        (MIRA 15:11)

           (KIDNEYS—DISEASES)

PYTEL', A. Ya., prof. (Moskva); GOLITORSKIY, S.D., mladsh ret. nauk (Moskva)

Prevention of urinary calculi and so-called urolithic diathesis.
Klin. med. 40 no.11:7-14   N'62   (MIRA 16:12)

PYTEL', Anton Yakovlevich; GOLIGORSKIY, Solomon Davidovich;
     SHOYMER, A., red.; SHEKHTER, D., tekhn. red.

     [Acute renal insufficiency] Ostraia pochechnaia nedo-
     statochnost'. Kishinev, Kartia moldoveniaske, 1963.
     250 p.   (MIRA 17:3)

GOLIGORSKIY, S.D.

Present status and tasks of urological services in Moldavia.
Zdravookhranenie (no.5:3-6 S-O'63   (MIRA 16:11)

1. Glavnyy urol g Ministerstva zdravookhraneniya Moldavskoy SSR

GOLIGORSKIY, S.D.

Some problems of resuscitation in urology and nephrology. Zha-
vookhranenie 6 no.5:24-28 S-O'63 (MIRA 16:12)

1. Iz urologicheskoy kliniki (zav. - nav. prorra. dock S.D.
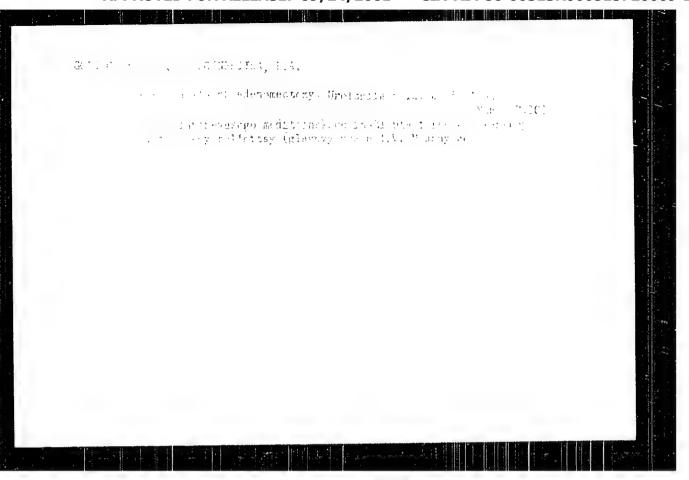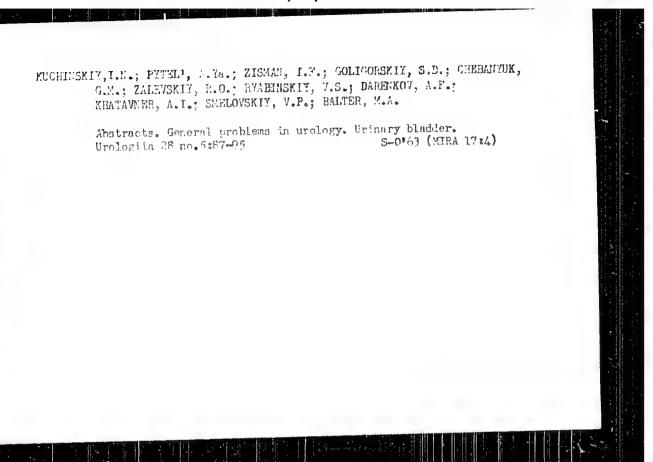Goligorskiy) Kishinevskogo meditsinskogo institute.

PYTEL', A.Ya.; GOLIGORSKIY, S.D.; VASIL'YEV,V.V.; KUCHINSKIY,I.N.; NISENBAUM,
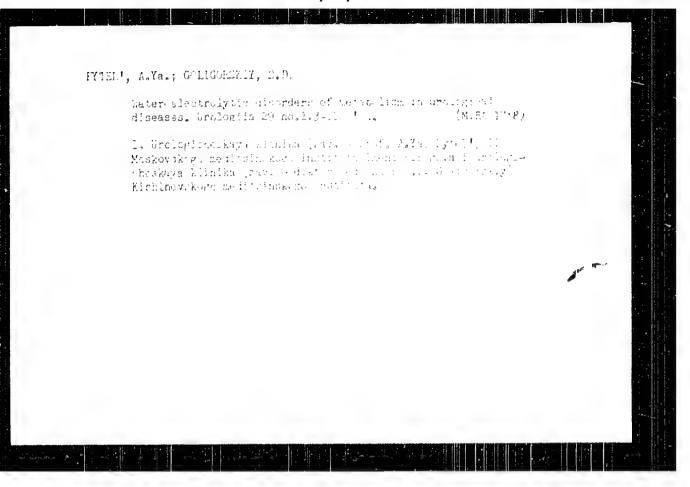L.I.; CHEBANYUK, G.M.; BOGDANOVICH, I.A.; PLISAN, S.O.; SURIS.A.S.

Achievements of contemporary nephrology. Kidneys and ureters.
Urinary bladder. Urologiia 28 no.3:82-92 '63   (MIRA 17:2)

PYTEL', A.Ya., prof.; GOLIGORSKIY, S.D., doktor med. nauk

Physicochemical combine: liver-kidneys. Nauka i zhizn' 30 no.6:
30-32 Je '63.   (MIRA 16:7)

                    (LIVER)   (KIDNEYS)

PYTEL', A.... .: £. (Moskva) :OLIGORG..I". ....,doktor med.nau (Kishinev)

ew data on the study of acute renal insufficiency. Urologiia
28 no.2:66-74 Mr-Ap'63. (MIRA 16:6)
(RENAL INSUFFICIENCY)

KUCHINSKIY, I.N.; PYTEL', A.Ya.; ZISMAN, I.F.; GOLIGORSKIY, S.D.; CHEBANYUK,
    G.M.; ZALEVSKIY, R.O.; RYABINSKIY, V.S.; DARENKOV, A.F.;
    KHATAVNER, A.I.; SMELOVSKIY, V.P.; BALTER, M.A.

Abstracts. General problems in urology. Urinary bladder.
Urologiia 28 no.5:87-95   S-0'63 (MIRA 17:4)

FYTEL', A.Ya.; GOLIGORSKIY, S.D.

Water-electrolytic disorders of metabolism in urological
diseases. Urologiia 29 no.1.3-11 '__.   (MIRA 17:8)

1. Urologicheskaya klinika (zav. - prof. A.Ya. Pytel') II
Moskovskogo meditsinskogo instituta imeni N.I.Pirogova i
cheskaya klinika (zav. - direktor prof. A.Ya. Pytel')
Kishinevskogo meditsinskogo instituta.

GOLIGORSKIY, S.D.

Some problems of acute and chronic renal insufficiency. Trudy
Kish. gos. med. inst. 24:5-22 '64.   (MIRA 18:1)

Some conclusions from the experience in corrective and plastic
surgery on kidneys and the upper urinary tract. Ibid.:206-208

PYTEL', A.Ya., GOLIGORSKIY, S.D.

Main results of the Second International Congress of Nephrologists,
Urologiia. 29 no.2:67-73 Mr-Ap '64.   (MIRA 18:7)
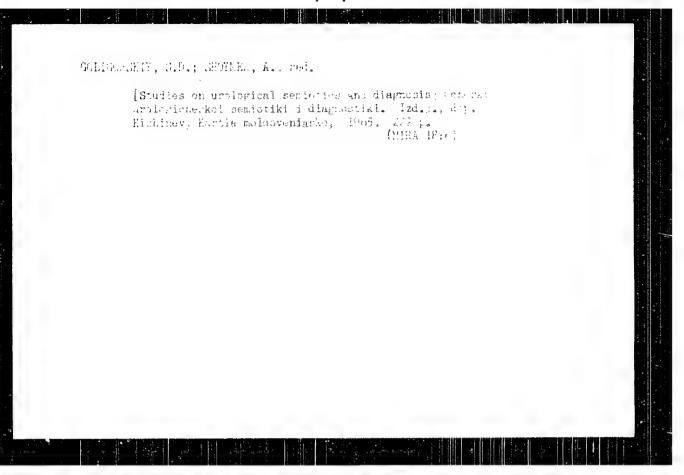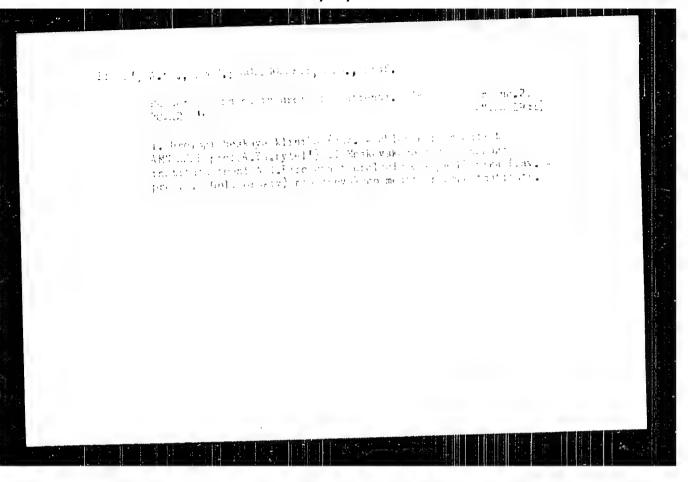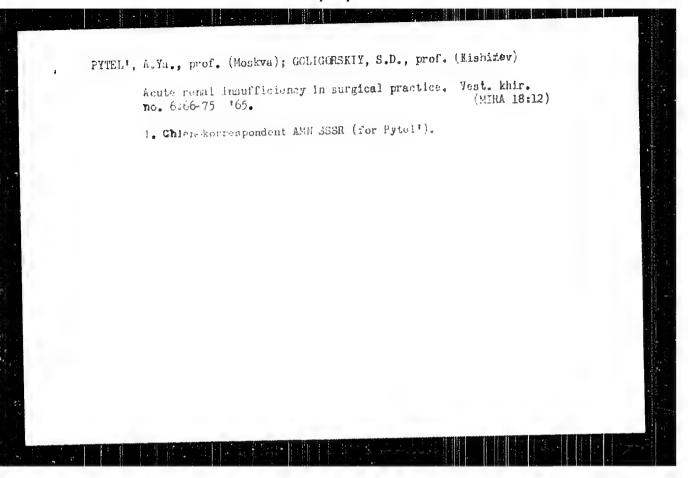
GOLIGORSKIY, S.D., prof. (Kishinev); KATSYF, A.M., kand. med. nauk
(Kishinev)

Review of M.D. Dzhavad-zade's monograph "Polycystosis of the
kidneys; clinical aspects and treatment." Vest. khir. 93 no.11:
140-142 N '64.   (MIRA 18:6)

GOLDBERSHT, S.D.; SPITER, A., red.

[Studies on urological semiotics and diagnosis; ocherki urologicheskoi semiotiki i diagnostiki. Izd.1, d?], Kishinev, Kartia moldoveniaske, 1965. 227 p.
(MIRA 18:6)

PYTEL', A.Ya., prof. (Moskva); GOLIGORSKIY, S.D., prof. (Kishizev)

Acute renal insufficiency in surgical practice. Vest. khir.
no. 6:66-75 '65. (MIRA 18:12)

1. Chlen-korrespondent AMN SSSR (for Pytel').

TYAPKIN, K.F. Prinimali uchastiye: GOLIK, A.I., inzh.; KHARCHENKO, S.I.,
inzh.; FILIPPOVA, T.S., inzh.; BOGUSHKO, T.I., red.izd-va; IVANOVA.
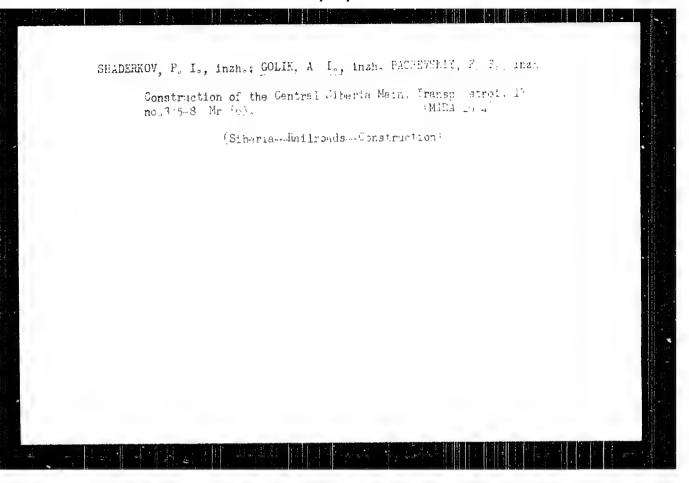A.G., tekhn. red.

[Interpretation of gravity anomalies caused by finite geologic
structures along the strike] Interpretatsiia gravitatsionnykh
anomalii, obuslovlennykh konechnymi po prostiraniiu geologiche-
skimi ob"ektami. Moskva, Gos. nauchno-tekhn. izd-vo litery po geol.
i okhrane nedr. Pt.1. 1961. 76 p.   (MIRA 14:11)
            (Gravity prospecting)

TYAPKIN, K.F.; GOLIK, A.I.; KHARCHENKO, S.P.

    Interpretation of gravity anomalies under conditions of block
    structure of the objects being studied. Geofiz. sbor. no.4:80-
    100 '63.   (MIRA 16:9)

    1. Dnepropetrovskiy gornyy institut imeni Artema.

SHADERKOV, P. I., inzh.; GOLIK, A. I., inzh. PACHEVSKIY, P. F., inzh.

Construction of the Central Siberia Main. Transp. strol. 13
no.3:5-8 Mr '63.   (MIRA 16:4)
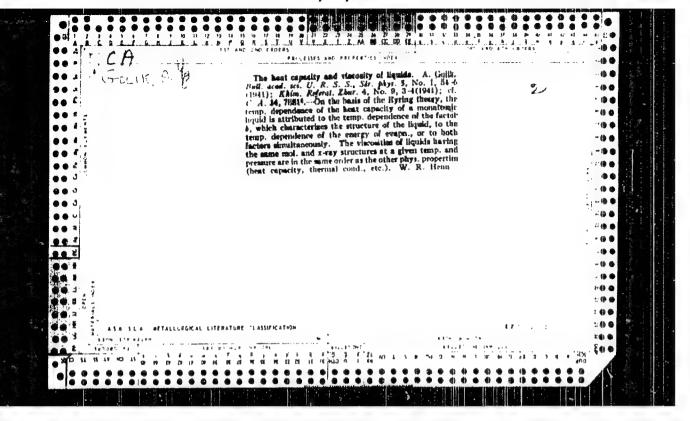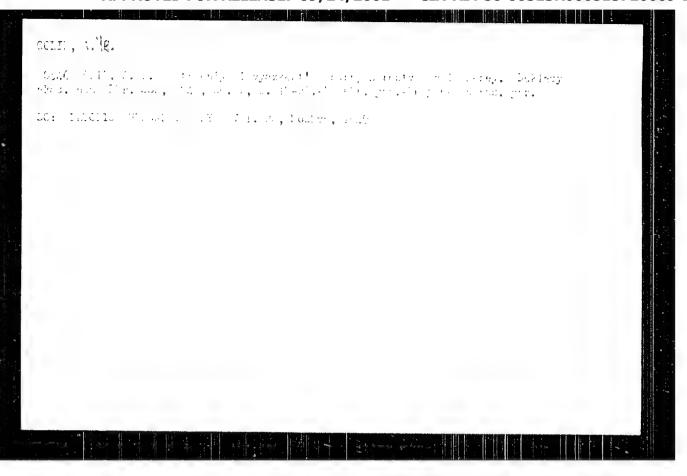
(Siberia—Railroads—Construction)

GOLIKOV, A.N., doktor veterin. nauk; SHITOV, S.T., kand. veterin. nauk

Novocaine block of craniocervical sympathetic ganglion in
treating eye diseases. Veterinariia 40 no.10:42-44 O'63.

(MIRA 17:5)

1. Moskovskaya veterinarnaya akademiya.

CA

PROCESSES AND PROPERTIES INDEX

The heat capacity and viscosity of liquids. A. Gulis.
Bull. acad. sci. U. R. S. S., Sér. phys. 5, No. 1, 56-8
(1941); Khim. Referat. Zhur. 4, No. 9, 3-4(1941); cf.
C. A. 34, 7081⁴.—On the basis of the Eyring theory, the
temp. dependence of the heat capacity of a monatomic
liquid is attributed to the temp. dependence of the factor
b, which characterizes the structure of the liquid, to the
temp. dependence of the energy of evapn., or to both
factors simultaneously. The viscosities of liquids having
the same mol. and x-ray structures at a given temp. and
pressure are in the same order as the other phys. properties
(heat capacity, thermal cond., etc.). W. R. Henn

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

Golik, A. Ye.

The viscosity and structure of liquid solutions of zinc, cadmium, tin, bismuth, and lead in mercury. A. Y. Golik and N. A. Hladich (T. G. Shevchenko State Univ., Kiev, Ukrain. Fiz. Zhur., X, 172-81 Russian summary, 181 (1958).—The viscosity coeff. was measured by a method proposed earlier (Golik, et al., Ukrain. Khim. Zhur. IV 627 (1951)), and was improved by protecting the amalgam against oxidation in the viscosimeter by application of dil. solns. of an acid. The ds. were measured in a pycnometer. The ds. decrease almost linearly with rising temp. The curves of the viscosity as a function of temp. between 300 and 900° K. of all these solns. lie between the curves of the components. The following concns. give wt. % result in identical viscosity curves: 8.3 Cd or 11.7 Zn, 11.0 Cd or 4.3 Zn, 20.0 Cd or 8.0 Zn. The activation energies for viscous flow were a linear function of the concn. Only the viscosity curve of Pb in Hg shows a distinct min., owing to their different structures. The viscosity curves for Sn, Pb, and Bi amalgams are more complicated than the ones for Zn and Cd. The results for the last 2 alloys can be interpreted by considering the potential-energy curves for Zn and Cd in Hg. The lower the min. in these curves, the higher the binding energy, the higher the crit. temp. of the metal under consideration, and the higher its viscosity. As the viscosity-temp. curve of the alloy lies between the ones for the components, the potential curves for Zn and Cd in Hg must lie between the ones of the components too, and the depth of the min. (and also of the bond energy, crit. temp., and viscosity) depends on the concn. of Zn or Cd, resp. These data are evidence that there is a relation between the viscosity and the structure of the liquids. 10 references. — Werner Goldbach.

Viscosity of solutions of electrolytes

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

Heat capacity of monatomic liquids A. Z. Golik
J. Expl. Theoret. Phys. (U. S. S. R.) 10, 346 8(1940).—
Using Eyring's theory of specific heat of monat. liquids,
the author concludes that C_v does not depend on the
temp., whereas C_p is given by the expression: $C_p = 3R + RT\alpha^2 v^{1/3}(v^{1/3} - \sigma)^{-1}$, where α is the expansion
coeff. and v the diam. of the atoms forming the liquid.
                                                Roksalana Gamow

PROCESSES AND PROPERTIES INDEX

Critical point. A. Z. Golik. *Uspekhi Fiz. Nauk* 23, 07-73(1940).—The scattering of x-rays by, the Raman spectra of, and the change of d. of substances at temps. near their crit. temps. are discussed and illustrated by exptl. data for water, ethylene, ether and isopentane.
F. H. Rathmann

GOLIK, A. Z.

USSR/Metals
    Alloys   Oct 48
    Viscometers

"Readings of Gert-Type Instruments," A. Z. Golik,
Inst Phys Chem, Acad Sci Ukrainian SSR, 1 p

"Zavod Lab" Vol XIV, No 10

Discusses various characteristics of metal alloys
which can be detected by use of Gert-type viscom-
eters.

28/49T104

GOLIK, O.Z.; RAVIKOVICH, S.D.

Structure and viscosity of binary solutions and mixtures.
Dop. AN URSR no.2:17-23 '49.   (MLRA 9:9)

1. Institut fizichnoi khimii im. L.V. Pisarzhevs'kogo AN URSR.
Predstaviv diysniy chlen AN URSR O.I. Brods'kiy.
     (Viscosity) (Solution (Chemistry))

GOLIK, A. Z.

PA 48/49T30

USSR/Chemistry - Viscosity
Chemistry - Bonds

Jan 49

"A Study of the Coefficient of Viscosity in
Isomorphic Substances," A. Z. Golik, S. D.
Ravikovich, Inst of Physicochem imeni L. V.
Pisarzhevsky, Acad Sci, Ukrainian SSR, Kiev,
4 pp

"Zhur Fiz Khim" Vol XXIII, No 1

Claims actual results can be achieved by analyzing
coefficients of viscosity of liquids which have
the same molecular structure and type of bond
between particles. Conducted experiments on

48/49T30

USSR/Chemistry - Viscosity (Contd)   Jan 49

following: paradichlorobenzene, paradibromo-
benzene, naphthalene and anthracene. Gives
mathematical formulas, tables, and graphs of
experimental results. Submitted 23 Mar 48.

48/49T30

Structure and viscosity of binary solutions and mixtures. A. Z. Golik and S. D. Raskovich (Inst. Phys. Chem., Acad. Sci. Ukr. S.S.R.). *Dopovidi Akad. Nauk Ukrain. S.S.R.* 1950, 101 (in Ukrainian); cf. C. A. 44, 8731d.—A relation is established between the viscosity ν and the crit. temp. t_c of mixts. of org. compds. of the same type. In mixts. of C_6H_{14} and C_6H_6, both ν and t_c increase with the concn. of C_6H_6. Selected exptl. data of t_c and of ν (temp. in parentheses) in stokes, are: pure C_6H_{14}, $t_c = 234°$, ν (40°) 0.00450, (80°) 0.00315, (150°) 0.00192; $C_6H_{14} + 11\% C_6H_6$, $t_c = 236$, ν (18.9) 0.00551, (44.5) 0.00447, (80.5) 0.00315; $C_6H_{14} + 40\% C_6H_6$, $t_c = 262°$, ν (21.5) 0.00500, (68.5) 0.00400, (147.5) 0.00235; $C_6H_{14} + 60\%$

C_6H_6, $t_c = 274°$, ν (14.0) 0.00650, (75.0) 0.00397, (145.0) 0.00249, pure C_6H_6, $t_c = 290°$, ν (32.5) 0.00765, (75.0) 0.00521, (150.0) 0.00322. The compn. $C_6H_{14} + 49\% C_6H_6$ has the same t_c as pure C_6H_6; correspondingly, ν is the same for the $C_6H_{14} + C_6H_6$ mixt. and for pure C_6H_6 over the whole temp. range. For all compns., log ν is a linear function of $(1/T)$, and the slope (activation energy) is the same for all compns. and for the pure components as well. Selected exptl. data for mixts. of MeOH and BuOH are: pure MeOH, $t_c = 232°$, ν (20) 0.00776, (80) 0.00387, (100) 0.00250; MeOH + 33% BuOH, $t_c = 236$, ν (18.5) 0.00574, (71.4) 0.00528, (110.6) 0.00354; MeOH + 55% BuOH, $t_c = 243$, ν (24.0) 0.01450, (64.5) 0.00838, (103.0) 0.00476; MeOH + 66% BuOH, $t_c = 250$, ν (20.0) 0.01686, (82.0) 0.00673, (118.0) 0.00432; MeOH + 83% BuOH, $t_c = 253$, ν (31.6) 0.02718, (60.0) 0.01164, (113.4) 0.00550; BuOH, $t_c = 287$, ν (31.0) 0.03808, (66.2) 0.01437, (130.0)

0.01048. Pure EtOH, $t_c = 243$, ν (20) 0.01364, (80) 0.00814, (160) 0.00234; EtOH + 40% BuOH, $t_c = 255$, ν (23.6) 0.02107, (62.5) 0.01019, (110.0) 0.00450; EtOH + 50% BuOH, $t_c = 269$, ν (14.0) 0.02805, (65.0) 0.01203, (110.6) 0.00588; pure BuOH, $t_c = 287°$, ν (20.0) 0.03808, (66.2) 0.01437, (130.0) 0.00480. The parallelism between ν and t_c repeats itself in these systems. With the aid of plots, it is found that pure PrOH has the same t_c and the same ν (at any temp.) as a mixt. of the compn. 17% MeOH + BuOH or 32% EtOH + BuOH. Pure BtOH has the same t_c and ν as a mixt. 45% MeOH + BuOH. In both MeOH — BuOH and EtOH + BuOH, log ν is a linear function of $(1/T)$ but the activation energies vary with the compn. In the system EtOH + C_6H_6, representative of a mixt. of components of unlike type, selected data are: EtOH + 18% C_6H_6, $t_c = 248$, ν (21.1) 0.01060, (78.9) 0.00286; EtOH + 39.5% C_6H_6, $t_c = 255$, ν (22.4) 0.00863, (61.0) 0.00504, (132.1) 0.00273; EtOH + 69% C_6H_6, $t_c = 270$, ν (15.8) 0.00768, (74.0) 0.00480, (146.0) 0.00270; pure C_6H_6, $t_c = 288$, ν (20.4) 0.00621, (70.1) 0.00378, (130) 0.00269. The curves of ν for the mixts. lie between those of the pure components, fanning out from a common high-temp. point of intersection.   N. Thon

CA

Structure and viscosity of binary liquid mixtures and solutions. A. Z. Golik and S. D. Ravikovich (Acad. Sci. Ukr. S.S.R., Kiev). Zhur. Fiz. Khim. 24, 524-8 (1950); cf. C.A. 43, 4064c.—In mixts. of similar liquids kinematic viscosity ν increases with crit. temp. T. Naphthalene (I) has $T = 480°$ and $\nu = 0.660, 0.491$, and 0.302 centistoke at 80, 205, and 360°. PhPh has $T = 529°$ and $\nu = 1.534, 0.579$, and 0.388 at 74.5, 167.5, and 325°. A 25 mol. % soln. of PhPh in I has $T = 497°$ and $\nu = 0.948$ and 0.380 at 90° and 235°. For 50% PhPh in I, $T = 512°$, $\nu = 1.008$ and 0.374 at 80 and 235°. For 75% PhPh in I, $T = 530°$, $\nu = 1.180$ and 0.381 at 80 and 235°. For PhCl, $T = 362.2°$, $\nu = 0.657, 0.421$, and 0.201 at 18.4, 68, and 146.5°. For PhBr $T = 397°$, $\nu = 0.681, 0.418$, and 0.267 at 20, 72, and 141.5°. For PhI $T = 448°$, $\nu = 0.81, 0.46$, and 0.30 at 20, 80, and 140°. The mixt. PhI 0.19, PhCl 0.81 mol. has $T = 397°$, and its ν is almost identical with that of PhBr. For PhI 0.25, PhCl 0.75 and PhCl 0.25, PhI 0.75, T was 406 and 438°, resp., and ν was 0.696 at 18.3° and 0.767 at 19.9°, resp. When the 2 components are very different, the ν-temp. curves may intersect. This seems to be the case for PhH + EtOH. PhH has $T = 288.5°$, $\nu = 0.021, 0.378$, and 0.269 at 20.4, 70.1, and 130°. EtOH has $T = 243.1°$, $\nu = 1.574, 0.634$, and 0.231 at 20, 80, and 160°. The mixts. contg. 33.7, 60.5, and 82 mol. % EtOH have $T = 267, 255$, and 248°, and $\nu = 0.675$ at 20.5°, 0.803 at 22.4°, and 1.092 at 21.1°, resp. Many other values of ν are given at intermediate temps. Khatilov's capillary viscometer (Zhur. Eksptl. i Teoret. Fiz. 8 (1938)) was used.   J. J. Bikerman

GOLIK, A.Z.; RAVIKOVICH, S.D.; ORISHCHENKO, A.V.

Viscosity and molecular structure of solutions. Ukr.khim.zhur.17
no.5:627-657 '51.   (MLRA 9:9)

1.Institut fizicheskey khimii AN USSR.
        (Solution (Chemistry)) (Viscosity)

GOLIIK, AZ

USSR.

Structure and viscosity of liquid metals and their solutions. A. Z. Golik. Dopovidi Akad. Nauk Ukr. R.S.R. 1952, No. 1, 16–20(Russian summary 20–1); cf. C.A. 46, 821i.—The viscosity η of solns. of Zn and Cd in Hg (up to 20 wt.%) in the range of 15–140° is expressed by $\eta = Ae^{(B/RT)}$ where A is a const. and B, the energy of activation of viscous flow, is related to the heat of vaporization L and the coördination no. Z by $L = cZB$; c is a const. The kinematic viscosity ν vs. temp. form a family of parallel lines with those of solns. of higher concn. and with components of higher crit. temp. above the others; the curves of solns. of 8.3, 11, and 20% Cd coincide with those of 3, 4.3, and 8.3% Zn, resp. From the straight lines of B vs. concn. for Cd and Zn solns. in Hg it is estd. that ν of 52% Zn in Hg is the same as that of pure Cd.   I. Bencowitz

GOLIK, A. Z.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
General and Physical Chemistry

Connection between the physical properties and molecular structure of matter in the liquid state. A. Z. Golik. *Ukrain. Khim. Zhur.* 18, 185-8.1952 XEn Russian.—Math.-theoretical discussion of the liquid state in which general equations for latent heat of evapn., compressibility coeff., and viscosity coeff. are formulated in terms of crit. temp., d. and mol. vol. Generally, the higher the crit. temp., the greater is the latent heat of evapn. and the smaller is the compressibility coeff. but the greater is the viscosity coeff. Typical curves are shown. The treatment cited above refers to mols. with similar structures.   G. M. K.

GOLIK, A. Z.

UBSR/Physics - Solid State Physics   Nov 53

"Conference on the Liquid State of Matter, Held 27-30 May 1953 at Kiev by the Academy of Sciences, Ukrainian SR, and Kiev State University im T. G. Shevchenko," S. D. Ravikovich, G. I. Foshchina and A. F. Skryshevskiy

Usp Fiz Nauk, Vol 51, No 3, pp 393-405

Summarize reports by the following: V. I. Danilov, on scattering of x-rays in liquids; A. F. Skryshevskiy, on x-ray study of solns of KOH, NaOH, LiOH, LiCl, and H_2SO_4; Ye. A. Toray-Koshits, on integral analysis of intensity curves; B. V. Deragin, Ye. G. Shvidkovskiy, C. Ya. Samoylov et al. on x-ray studies of liquid structure; A. Z. Golik, on characteristics of molecular structure of liquids; I. V. Radchenko, on modeling of liquids; P. K. Shestakovich, on new liquid models and influence of central and dipole forces on close ordering; A. Z. Golik and his associates S. D. Ravikovich, A. V. Grishchenko, V. I. Solomko, and B. A. Tyndich, on viscosity and density of matter in the liquid state; V. M. Chulanovskiy and D. S. Karenetskaya, on the influence of molecules' size and the intermolecular intensity on viscosity coeff; A. F. Prymak, on thermo-diffusion in binary systems; S. S. Urazovskiy, presence of grouping of identical atoms; A. R. Tegel', on relation between electrical properties and structure of liquids; M. F. Vuks, on light-dispersion method for studying liquids' structure.
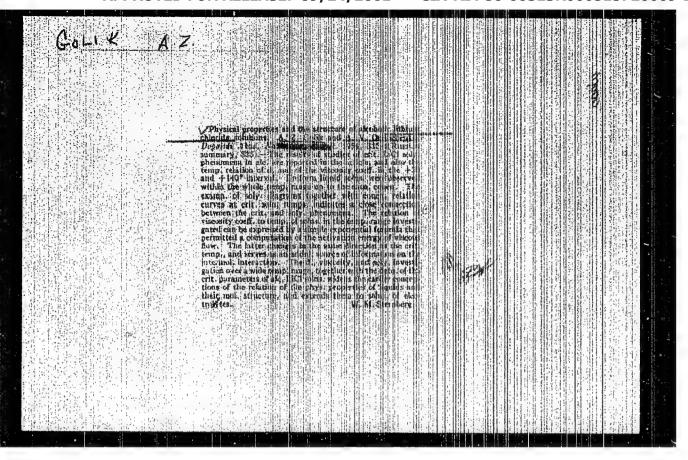
GOLIK, A.Z., doktor fiziko-matematicheskikh nauk, otvetstvennyy redaktor;
RAVIKOVICH, S.D., kandidat fiziko-matematicheskikh nauk, redaktor;
ROSHCHINA, G.P., kandidat fiziko-matematicheskikh nauk, redaktor;
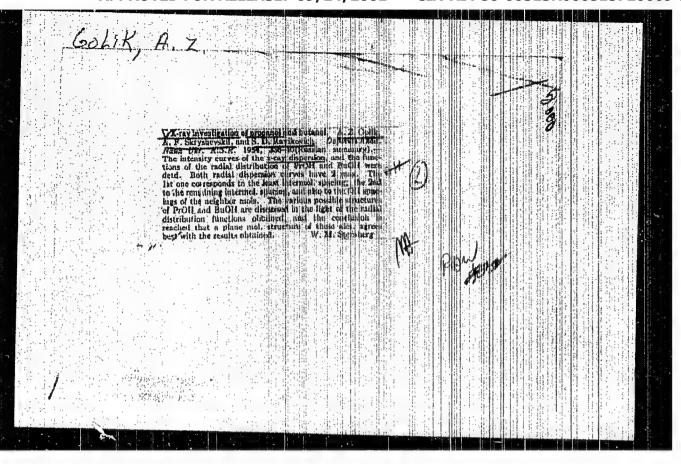SKRYSHEVSKIY, A.F., kandidat fiziko-matematicheskikh nauk, redaktor.

[Structure and physical properties of matter in liquid state;
papers of a conference held in Kiev, May 28-30, 1953] Stroenie i
fizicheskie svoistva veshchestva v zhidkom sostoianii; materialy
soveshchaniia, sostoiavshogosia v Kieve 28-30 maia 1953 g. [Kiev]
Izd-vo Kievskogo gos. univ. im. T.G.Shevchenko, 1954. 203 p.

(MLRA 9:8)

1. Akademiya nauk URSR, Kiyev
       (Liquids)

GOLIK   A Z

Physical properties and the structure of alcohols. Lithium chloride solutions. A Z Golik and V. De... Kiev...
Doppov... 1958, 115. ... Russ.
summary, 335.) — The results of studies of crit. (crit. sol.) phenomena in alc. are reported for lithium, and alco. the temp. relation of d... and of the viscosity coeff. in the +... and +140° interval... The turbid liquid semi... were observed within the whole temp. range... in the alco. compn... The extrap. of soly... diagram... further with comple. relation curves at crit. soln. temp. indicated a close connection between the crit. and soly. phenomena... The relation viscosity coeff. to temp. of soln. in the configurations investigated can be expressed by a simple experimental formula that permitted a computation of the activation energy of viscous flow... The latter change... in the same direction at the crit. temp... and serves as an add... source of information on the internal interaction... The d... viscosity, and soly. investigation over a wide temp. range... together with the data of the crit. parameters of alc. LiCl soln. widen considerably conceptions of the relation of the physic. properties of liquids and their mol. structure, and extends them to solns. of electrolytes.
                                                    V. M. Sternberg

GOLIK, A. Z.

X-ray investigation of propanol and butanol. A. Z. Golik, A. F. Skryshevskii, and S. D. Ravikovich. *Nauk Univ. R.S.R.* 1954, (Russian summary).— The intensity curves of the x-ray dispersion, and the functions of the radial distribution of PrOH and BuOH were detd. Both radial dispersion curves have 2 max. The 1st one corresponds to the least internal spacing; the 2nd to the remaining internal spacing, and also to the OH spacings of the neighbor mols. The various possible structures of PrOH and BuOH are discussed in the light of the radial distribution functions obtained, and the conclusion is reached that a plane mol. structure of these best agrees best with the results obtained. W. M. Sternberg

GOLIK, O.Z.; ORISHCHENKO, A.V.; ARTEMCHENKO, O.G.

"Negative" viscosity effect of nonaqueous solutions of potassium iodide.
Dep.AN URSR no.6:453-456 '54.   (MIRA 9:9)

1.Institut fizchnei khimii imeni L.V.Pisarzhevs'koge AN URSR. Predstaviv
diysniy chlen AN URSR O.I.Breds'kiy.
                    (Potassium iodide)

Golik, A.Z.

USSR/ Physical Chemistry - Liquids and Amorphous Bodies. Gases. B-6

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7377

Author : Golik, A.Z. Skrishyevskiy, A.F., and Ravikovich, S.I.
Inst : Academy of Sciences Ukrainian SSR
Title : Radiographic Investigation of Methyl Alcohol

Orig Pub : Dopovidi AN URSR, 1956, No 6, 457-459 (published in Ukrainian with a Russian summary)

Abstract : The X-ray intensity curve and radial distribution function for methyl alcohol have been calculated. The radial distribution curve shows two peaks. The first peak corresponds to the intramolecular distance and the second is determined by the sum of the distances to the OH-groups neighbouring molecules. The first peak in the radial distribution curve was isolated from the large-distance side; this does not agree with the radial distribution curve which previously determined (G.G. Harvey, J. Chem. Phys., 1938, 6, 3, 111).

Card 1/1   - 58 -

GOLIK, A. Z.

"Structure and Physical Properties of Matter in the Liquid State", a paper presented at the second conference on the Liquid State of Matter, Kiev, 30 May to June 1955, Usp. Fiz. Nauk, April 1955

GOLIK, A. Z.

"Nature of 'Negative' Viscosity of Electrolytic Solutions", a paper
presented at the Second conference on the Liquid State of Matter, Kiev, 30 May to
3 June 1955, Usp. Fiz. Nauk,, April 1955

Golik, A.Z.

Investigation of the latent heat of vaporization of liquids. L. Compensating microcalorimeter for the measurement of the latent heat of vaporization. A. Z. Golik, S. D. Ravi-kovich, V. P. Sokolov, and Yu. I. Shimanskii. (T. Shevchenko State Univ.) Ukr. Fiz. Zhurnal. Akad. Nauk Ukr. R. S. R. 1955, No. 2, 168-70 (Russian summary).—The calorimeter, having capillaries for the introduction of the soln. and the escape of the vapors and having a B spiral heater, a thermocouple, and a stirrer, is placed in a Dewar flask through which H_2O from a thermostat is circulated. A fan stirs the air in the Dewar flask. The opposite end of the thermocouple is immersed in the thermostat so that the difference in the temp. is recorded. The evapn. of 8-10 ml. of the liquid is sufficient for a detn.— A. Z. Golik, S. D. Ravikovich, Yu. I. Shimanskii, and V. B. Baranovs'kii. Ibid. 271-? (Russian summary).—The latent heat of evapn. L was detd. at 20-60° for the following solns.: (a) MeOH and EtOH in H_2O, (b) EtBr and PhI or PhCl, and (c) C_6H_6 and C_6H_5I in C_6H_6. L of (a) and (b) is a linear function of the concn. C. When expressed as kcal./mol. L is higher for liquids of higher crit. temp. (cf. C.A. 46, 321i; 48, 4911f); when expressed as cal./g. the inverse is true. Solns. of c show an anomaly in that the curve of L vs. C passes through a min. at about 20% C_6H_5I; L is higher for liquids with higher L regardless of its units.

I. Benckova

USSR/Atomic and Molecular Physics - Statistical Physics, Thermodynamics, D-3

GOLIK, A.Z.

✓ Physical properties of substances in the liquid state and Mendeleev's law. A. Z. Golik (T. G. Shevchenko State Univ., Kiev). Dopovidi Akad. Nauk Ukr. R.S.R. 1955, No. 4, 349-52(Russian summary, 352-3); cf. C.A. 49, 4011e.—The coeffs. of viscosity η and compressibility σ and the latent heat of evapn. L of elements of the same type of crystal lattice and similar mol. bonds are functions of the crit. temp. and the depth and the wall steepness of the potential well detg. the reaction between the mols. The greater the depth and the steeper the sides, the higher are η and L and the lower is σ. These facts assume a regularity in accordance with Mendeleev's periodic law.   I. B.

GOLIK, A. Z.

Effect of "negative" viscosity of solution of potassium iodide in binary mixtures of alcohols. A. Z. Golik, Z. Orishchenko, and O. G. Artemchenko (State Univ., Kiev). Dopoved Akad. Nauk Ukr. R.S.R. 1955, No. 6, 706 (Russian summary); cf. ibid. 480 (1954).—The d. and viscosity of KI soln. in binary mixts. of EtOH, BuOH, glycerol, and glycerol were detd. at 25–80°. The curves (η vs. % KI for different concns. of BuOH-glycerol at 25, 60, and 80° are discussed (η and η are the kinematic viscosities of the soln. and solvent, resp.). The neg. effect (η/η₀) increases with the glycerol concn. and is higher with glycerol than with the lower alcs.; it decreases with the temp. It is thus possible to obtain a continuous transition from the neg. effect to its max. by changing the concn. of the solvent. Neg. viscosity is ascribed to the reaction of the ions of the solute with the solvent. L. Hunceavine

GOLIK, A.Z.

Structure and properties of matter in the liquid state. Trudy Inst.fiz.AN URSR no.6:70-82 '55.   (MLRA 9:8)
(Liquids) (Matter--Properties)

USSR/Physical Chemistry - Liquids and Amorphous Substances.   B-6
                          Gases.

Abs Jour   : Referat Zhur - Khimiya, No 6, 25 March 1957, 18390

Author   : Golik, A.Z.
Inst   : RZhKhim, 1956, 18694
Title   : About Certain Problems Referring to the Theory of Liquid
               State.

Orig Pub   : Nauk. zap. Kiivs'k un-t, 1955, 13, No 7, 145-152

Abstract   : Connection between the structure of a liquid and its pro-
               perties is qualitatively analyzed. The attention is cal-
               led to the fact that substances having the same lattice
               in solid state and the same intermolecular interaction
               are characterized by a family of similar curves upon the
               diagrams property-temperature. This is tied up with the
               fact that the energy of molecules of a liquid, in first
               approximation, is determined by the close order: the re-
               ciprocal action between different molecules and their

Card 1/2   - 130 -

USSR/Physical Chemistry -- Liquids and Amorphous Bodies. Gases, B-6

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 60900

        Author: Golik, A. Z.

   Institution: None

         Title: Molecular Structure and Viscosity of Liquid Metals and Alloys

        Original
     Periodical: Nauk. zap. K.ivs k. un-t 1955, 14, No 8, 159-169

      Abstract: As a result of considerations of the question concerning the re-
                  lationship between molecular structure of liquid metals and their
                  physical properties the author reaches the conclusion that the co-
                  efficient of viscosity of liquid metals and metal alloys depends
                  on the molecular structure of the given liquid. For the study of
                  this correlation it is appropriate to classify liquid metals as
                  well as other liquids on the basis of identical molecular structure.
                  Within a given group of liquids of identical molecular structure
                  the temperature dependence curve of the viscosity coefficient is
                  located higher with increasing value of the critical temperature

Card 1/2

USSR/Physical Chemistry - Liquids and Amorphous Bodies. Glasses B-6

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 60908

Abstract: of a given substance. The temperature dependence curve of the viscosity of a molecular miscible solution the components of which have the same molecular structure is located between the curves of the components and its location is higher with increasing boiling temperature (critical temperature) of the solution. If the critical temperature of pure liquids or solutions of the same type is the same the viscosity coefficients of such substances will be equal at any temperature. Thus coincidence of temperature dependence curves of viscosity coefficient constitutes an index of identical molecular structure of the liquids.

Card 2/2

GOLIK, A.Z.

USSR/ Chemistry - Physical chemistry

Card 1/2   Pub. 116 - 7/25

Authors   : Golik, A. Z., and Ravikovich, S. D.

Title   : Viscosity and structure of normal paraffins and their solutions in
              liquid state

Periodical : Ukr. khim. zhur, 21/1, 39-47, 1955

Abstract   : The viscosity coefficient of pure paraffins and their binary and ter-
              nary solutions was investigated in connection with the molecular struc-
              ture. It was found that paraffin molecules do not posses dipole
              moments, consequently, the reaction between them is determined by weak
              residual dispersion forces. Normal paraffins were observed to form a
              group characterized by an analogous function of atom orientation and
              identical type of intermolecular bond. The activation energy of the
              viscous flow of paraffin solutions was established to be a square

Institution : Acad. of Sc. Ukr-SSR, The L.V. Pisarzhevskiy Inst. of Phys. Chem.

Submitted   : January 29, 1954

Periodical   :   Ukr. khim. zhur. 21/1, 39-47, 1955

Card 2/2   :   Pub. 116 - 7/25

Abstract   :   function of the concentration. Solutions and pure paraffins have
shown an identical viscosity coefficient at all temperature intervals
of the liquid phase. Six references : 5 USSR and 1 USA (1939-1949).
Tables; graphs; drawings.

Golik, A. Z.

USSR/ Chemistry - Physical chemistry

Card 1/1   Pub. 116 - 5/24

Authors   : Golik, A. Z.; Ravikovich, S. D.; and Orishchenko, A. V.

Title   : Viscosity and molecular structure of normal alcohols and their solutions

Periodical : Ukr. khim. zhur. 21/2, 167-175, 1955

Abstract   : Data are presented on the density, viscosity and critical temperatures of
             normal alcohols and their solutions in connection with the molecular struc-
             ture. It is shown that the activation energy of the viscous flow and the
             pre-exponential multiple factor are the functions of concentration; the
             activation energy increases and the pre-exponential multiple factor de-
             creases with the increase in concentration of the component which possesses
             a higher critical temperature. Data regarding the critical temperatures
             and viscosity of binary and ternary alcohol solutions are included. Eight
             USSR references (1937-1952). Tables; graphs; drawing.

Institution : Acad. of Sc., Ukr. SSR, The L. V. Pisarzhevskiy Inst. of Phys. Chem.

Submitted   : January 29, 1954

Golik, A. Z.

USSR/ Chemistry - Physical chemistry

Card   1/1   Pub. 116 - 7/30

Authors   : Golik, A. Z.; Orishchenko, A. V.; Ravikovich, S. D.; Solonko, V. P.;
                 Roshchina, G. P.; and Shimanskiy, Yu. I.
Title   : Viscosity, density and critical temperatures of alcohol solutions in
                 monocarboxylic acids

Periodical   : Ukr. khim. zhur. 21/3, 318-326, June 1955

Abstract   : The viscosity, density and critical temperatures of alcohol solutions were
                 investigated in monocarboxylic acids in which the chemical esterification
                 reaction usually takes place. The general laws governing the concentration
                 and thermal dependence of the characteristics mentioned and the laws govern-
                 ing the activation energy of the viscous flow and specific volumes were es-
                 tablished. It is shown that in the case of solutions, the components of
                 which react intensively between themselves, and that the concentration and
                 thermal depandences are also subject to other more complicated laws. Nine
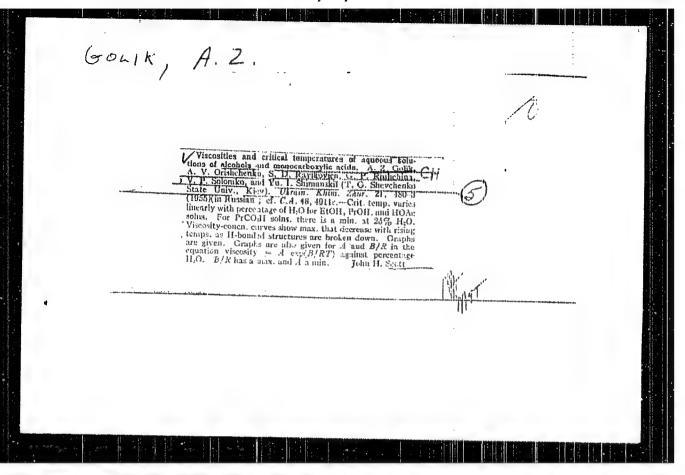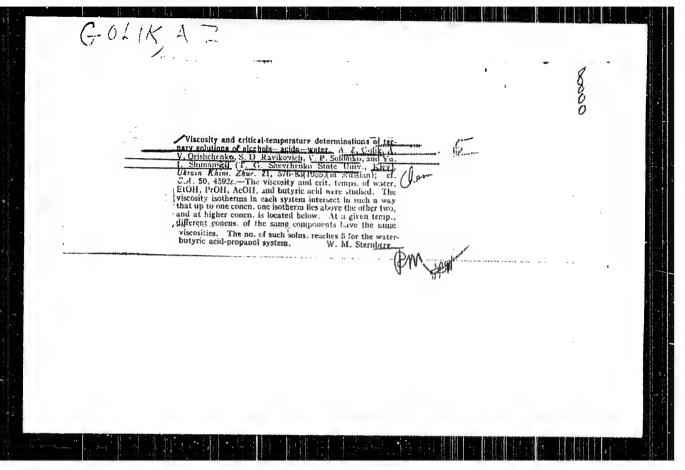   Russian and USSR references (1877-1955). Graphs.

Institution : Acad. of Sc., Ukr. SSR., The L. V. Pisarzhevskiy Inst. of Phys. Chem. and
                 the T. G. Shevchenko State Univ., Kiev

Submitted   : December 16, 1954

GOLIK, A. Z.

Viscosities and critical temperatures of aqueous solutions of alcohols and monocarboxylic acids. A. Z. Golik, A. V. Orishchenko, S. D. Ravikovich, N. P. Riulichin, V. P. Solomko, and Yu. I. Shimanskii (T. G. Shevchenko State Univ., Kiev). *Ukrain. Khim. Zhur.* 21, 180-3 (1955)(in Russian ; cf. *C.A.* 48, 4011c.—Crit. temp. varies linearly with percentage of H_2O for EtOH, PrOH, and HOAc solns. For $PrCO_2H$ solns. there is a min. at 23% H_2O. Viscosity-concn. curves show max. that decrease with rising temps. as H-bonded structures are broken down. Graphs are given. Graphs are also given for A and B/R in the equation viscosity $= A\ exp(B/RT)$ against percentage H_2O. B/R has a max. and A a min.   John H. Scott

GOLIK, A Z

Viscosity and critical-temperature determinations of ternary solutions of alcohols—acids—water. A. Z. Golik, A. V. Orishchenko, S. D. Ravikovich, V. P. Sofilnko, and Yu. I. Shimanski (T. G. Saevchenko State Univ., Kiev). Ukrain Khim. Zhur. 21, 576-85(1955)(in Russian); cf. C.A. 50, 4592c.—The viscosity and crit. temps. of water, EtOH, PrOH, AcOH, and butyric acid were studied. The viscosity isotherms in each system intersect in such a way that up to one concn. one isotherm lies above the other two, and at higher concn. is located below. At a given temp., different concns. of the same components have the same viscosities. The no. of such solns. reaches 5 for the water-butyric acid-propanol system.   W. M. Sternburg

S. /Physical Chemistry, Solutions, Theory of Acids and Bases.   B-11

Author   : A. A. Polik, N. A. Ryndich.
Inst   : Not given
Title   : Viscosity and structure of liquid solutions of Zinc, cadmium,
           tin, bismuth and lead in mercury.

Orig Pub : Ukr fiz. Zh 1956, I, No 2, 170-182 (ukr., res. russ).

Abstract : Viscosity (γ) and density (d) of binary liquid solutions of
           Zinc (I), Cadmium (II), Tin (III), Bismuth (IV) and Lead (V)
           in mercury (VI) are studied. Solutions I and II in VI, the
           components of which have a similar molecular structure belong
           to the number of molecular-mixing solutions. The curves of
           temperature dependence of η of the above mentioned solutions
           lie between curves of the components and grow higher with the
           increase in concentration of I or II, i.e. with the rise of
           the critical temperature of the solution. For series of solu-
           tions I and II in III, the curve of temperature dependence of
           η coincided with the whole studied temperature range. Solu-
           tions with identical d were also obtained. But η of these
           solutions is as different as is d in isoviscous solutions.

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21-5-8/26

AUTHORS: Roshchina,G.P.(Roshchyna, H.P.), Golik, A.Z. (Holyk, O.Z.)

TITLE: Molecular Scattering of Light in Isoviscous Liquids (Mole-
kulyarnoye rasseyaniye sveta v izovyazkostnykh zhidkostyakh)

PERIODICAL: Dopovidi Akademii Nauk Ukrains'koi RSR, 1957, Nr 5, pp. 457-
460 (USSR)

ABSTRACT: The authors investigated molecular scattering of light in iso-
viscous liquid in order to ascertain the connection between the
characteristics of scattered light and the structure of the
solutions. Isoviscous liquids were first discovered by one
of the authors, A.Z. Golik (Ref.1). These liquids have equal
critical temperatures and similar curves for the temperature
dependence of viscosity. The investigation of the structure
of these liquids with the aid of X-ray scattering shows that
they posses the same structure. The liquids studied in this
research were isoviscous solutions of n-paraffin and of n-
alcohols. The following results were obtained with these
liquids. In the case of n-paraffin solutions, isoviscous with
n-heptane, there is a coincidence of the temperature-depend-
ence curves of the intensity of the isotropic part of scatter-
ed light. For solutions, isoviscous with ethyl alcohol and
propyl alcohol, such an agreement of the intensity curves is

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Molecular Scattering of Light in Isoviscous Liquids   21-5-8/26

not always observed. The intensities of the anisotropic parts
of scattered light do not coincide for isoviscous liquids
(except for heptane and an isoviscous solution of 50.6% of
octane in hexane). On the basis of these investigations the
coefficients were computed for the isothermal compressibili-
ty of isoviscous liquids. Isoviscous liquids were shown to
have the same coefficients of isothermal compressibility. The
article contains 2 figures, 2 tables and 4 Slavic references.

ASSOCIATION: Kiyev State University (Kyivs'kyy darshavnyy universytet)

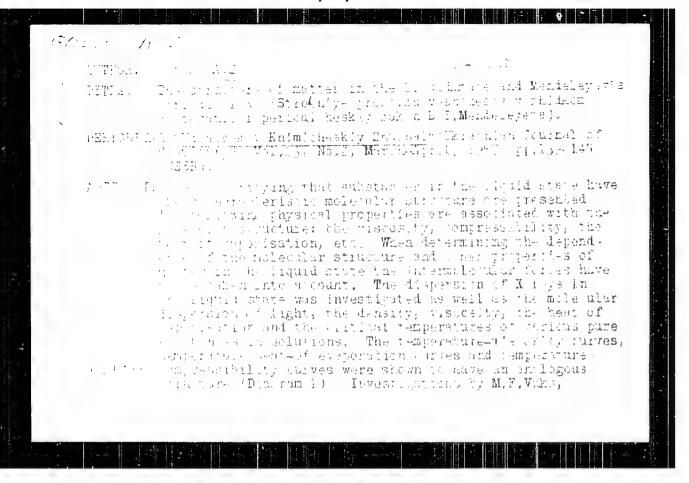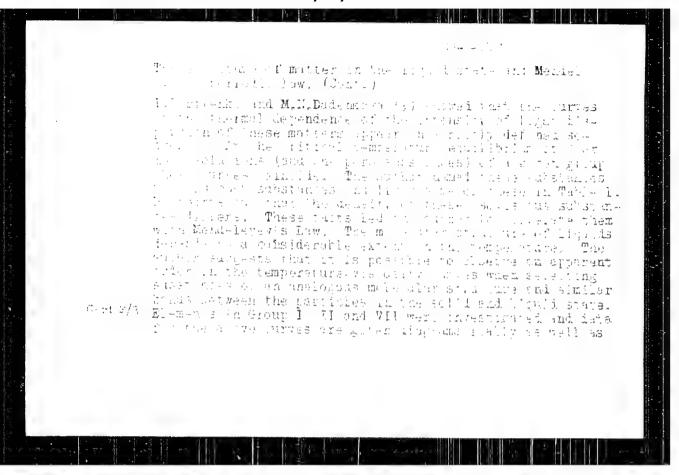PRESENTED: By V.Ye. Lashkarev(Lashkar'ov), Member of the AN Ukrainian SSR
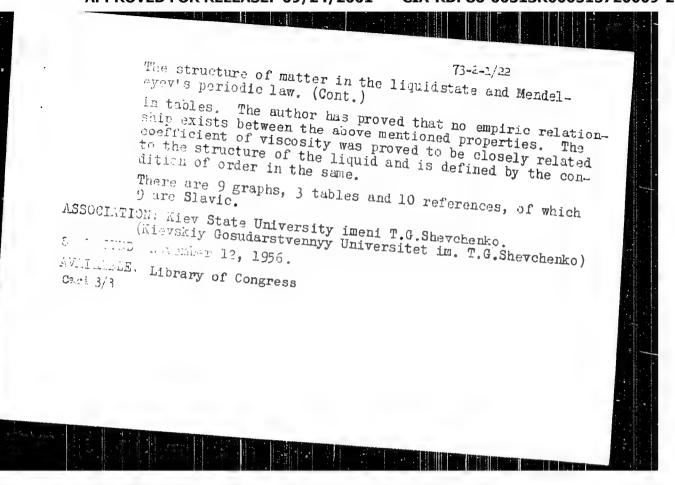
SUBMITTED: 21 December 1956

AVAILABLE: Library of Congress

Card 2/2

TITLE: The structure of matter in the liquid state and Mendeleyev's
           ... (Stroeniye ... matter i v ... ...
           ... a periodical book by ... D.I.Mendeleyev).

PERIODICAL: ... Kolmichevskly Zhurnal (Ukrainian Journal of
           Chemistry) Vol. 13, No. 2, Mariupol', 1947 p. 135-145
           (USSR).

... ...ying that substances in the liquid state have
           ... characteristic molecular structure are presented
           ... various physical properties are associated with the
           ... structure: the viscosity, compressibility, the
           ... vaporisation, etc. When determining the depend-
           ... of the molecular structure and other properties of
           ... the liquid state the intermolecular forces have
           ... taken into account. The dispersion of X-rays in
           ... liquid state was investigated as well as the molecular
           dispersion of light, the density, viscosity, the heat of
           vaporisation and the critical temperatures of various pure
           ... in solutions. The temperature-viscosity curves,
           temperature-heat-of-evaporation curves and temperature-
           compressibility curves were shown to have an analogous
           structure (Diagram 1) Investigations by M.F.Vuks,

The [...] state of matter in the [...] liquid state and Medel-Darvell's law. (Cont.)

[...] Snovak, and M.N.Dadamirov [?] [...] that the curves [...] the thermal dependence of the intensity of light [...] [...] of these matters appear [...] rigidly defined so [...] [...] the critical temperature equilibria [...] [...] solutions (and in [...] substances [...] listed [...] in Table 1. [...] the density, [...] above the substances [...] layers. These facts led [...] [...] them with Meial-Darvell's Law. The [...] of liquids [...] a considerable extent [...] temperature. They [...] suggests that it is possible to [...] an apparent [...] in the temperature-time curve [...] when selecting [...] an analogous molecular structure and similar [...] between the particles in the solid and liquid state. Elements in Group I, II and VII were investigated and data [...] the curves are given diagrammatically as well as

The structure of matter in the liquid state and Mendel-
eyev's periodic law. (Cont.)

73-2-1/22

in tables. The author has proved that no empiric relation-
ship exists between the above mentioned properties. The
coefficient of viscosity was proved to be closely related
to the structure of the liquid and is defined by the con-
dition of order in the same.

There are 9 graphs, 3 tables and 10 references, of which
9 are Slavic.

ASSOCIATION: Kiev State University imeni T.G.Shevchenko.
(Kievskiy Gosudarstvennyy Universitet im. T.G.Shevchenko)

S   HUD   November 12, 1956.

AVAILABLE. Library of Congress

Card 3/3

GOLIK, A Z

AUTHORS: Golik, A. Z. , Karlikov, D. N.

TITLE: On the Relation Between the Coefficient of Viscosity and the
               Molecular Structure of Liquids (O svyazi koeffitsiyent.
               vyazkosti so strukturoy veshchestva v zhidkom sostoyanii

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr. ., pp. . . . .
               (USSR)

ABSTRACT: The relationship between the coefficient of viscosity and
               other physical properties, and particularly the structure of
               the substance in its liquid state are of great interest both
               for the development of the theory of the liquid state and of
               the viscosity, but also for the practical aspects of physical-
               -chemical analysis. However, this set of interrelationsships
               has not yet been clarified. On the one hand, the knowledge
               of the structure of liquids required for this purpose is
               lacking, and on the other hand the physical properties of the
               structure of liquids have not been investigated in suffi-
               cient detail. The authors of the paper under review made the
Card 1/3   attempt to overcome the difficulties , which are encountered

On the Relation Between the Coefficient of Viscosity and the Molecular
Structure of Liquids

in clarifying the relationships between viscosity and struc-
ture etc., by an economical selection of the objects of their
investigation. For this purpose, also other properties were
studied that are in some relationship with the structure. The
objects were selected from the point of view of the similari-
ty of their molecular structures. The following properties
were studied within a wide temperature range: density, heat
of vaporization, molecular dispersion of light, and critical
temperature. It was demonstrated that the curves of tempera-
ture dependence of the viscosity and of the heat of vapori-
zation are placed the higher, and the curves of compression
are placed the lower, the higher the critical temperature of
the substance under consideration. It was also proven that
the interrelationship between viscosity and other properties
connected with the structure, on the one hand, and the criti-
cal temperature, on the other hand, is a consequence of
the periodic law of Mendeleyev. The analysis of the curves
of atomic distribution of the isoviscous solutions, as well
as the analysis of the curves of intensity, show complete
coincidence. Therefore it follows that liquids with identical
coefficients of viscosity (isoviscous liquids) also have

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On the Relation Between the Coefficient of Viscosity and the Molecular
Structure of Liquids

identical orders of proximity and identical structures. There
are 4 figures, 1 table, and 9 references, 8 of which are
Soviet.

ASSOCIATION: State University imeni T. G. Shevchenko, Kiyev
(Kiyevskiy Gosudarstvenny universitet im. T. G. Shevchenko)

Krivoy Rog Pedagogical Institute
(Krivorozhskiy pedinstitut)

PRESENTED: November 12, 1956, by G. V. Kurdyumov, Member of the Academy

SUBMITTED: November 6, 1956

AVAILABLE: Library of Congress

Card 3/3

SOV/21-59-2-20/29

AUTHORS: Golik, A.L., Ravikovich, S.D., Baranovskiy, V.Ye.

TITLE: The Investigation of Evaporation Heats of Solutions of Some
              Deuterium Compounds (Issledovaniye teplot ispareniya rastvorov
              nekotorykh deyterosoyedineniy)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 2,
              pp 210-212 (USSR)

ABSTRACT: The authors investigated the evaporation heat of heavy water
              solutions in ordinary water and of deuterium-butanol in
              butanol. It is shown that in the first case the concentration
              dependence of the evaporation heat has a clear-cut maximum
              at 40°C, and in the second case it degenerates into an S-
              shaped curve. The regularities observed indicate the com-
              plicated nature of intermolecular interaction. Hence the
              authors draw the conclusion that the conception of an "ideal"
              solution as a standard pattern for comparing different solu-
              tions is not applicable.
              There are 2 graphs, and 7 references, 3 of which are Soviet,
Card 1/2   2 English, 1 German and 1 American.

The Investigation of Evaporation Heats of Solutions of Some Deuterium
Compounds

SOV/61-5.-3-13/25

ASSOCIATIONS: Kiyevskiy gosudarstvennyy universitet (Kiyev State University)
Kiyevskiy meditsinskiy institut (Kiyev Medical Institute)

PRESENTED: By Member of the AS Ukr.SR, A I. Brodskiy

SUBMITTED: May 9, 1957

NOTE: Russian title and Russian names of individuals and institu-
tions appearing in this article have been used in the trans-
literation.

Card 2/2

GOLIK, A.Z. [Holyk, O.Z.]; RYNDICH, N.A. [Ryndych, N.A.]; BABENKO, S.A.

Viscosity of a Sn - Bi system [with summary in English]. Uk·.
fiz. zhur. 3 no.3:365-369 My—Je '58.   (MIRA 11:10)

1. Kiyevskiy gosudarstvennyy universitet.
    (Systems (Chemistry))   (Viscosity)